



SEQUENCE LISTING

<110> Baker, Brenda F.
Cowser, Lex M.
Monia, Brett P.
Xu, Xiaoxing S.

<120> ANTISENSE MODULATION OF TRAF EXPRESSION

<130> ISPH-0321

<140>

<141>

<160> 228

<210> 1

<211> 2380

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (76)..(1326)

<300>

<308> U19261 Genbank

<309> 1995-02-21

<400> 1

```
gccaggactc cacaaggctg gtcccctgcc ctggagcaac ttaaacaggc cctctggcca 60
gcctggaacc ctgag atg gcc tcc agc tca ggc agc agt cct cgc ccg gcc 111
          Met Ala Ser Ser Ser Gly Ser Ser Pro Arg Pro Ala
              1              5              10
cct gat gag aat gag ttt ccc ttt ggg tgc cct ccc acc gtc tgc cag 159
Pro Asp Glu Asn Glu Phe Pro Phe Gly Cys Pro Pro Thr Val Cys Gln
      15              20              25
gac cca aag gag ccc agg gct ctc tgc tgt gca ggc tgt ctc tct gag 207
Asp Pro Lys Glu Pro Arg Ala Leu Cys Cys Ala Gly Cys Leu Ser Glu
      30              35              40
aac ccg agg aat ggc gag gat cag atc tgc ccc aaa tgc aga ggg gaa 255
Asn Pro Arg Asn Gly Glu Asp Gln Ile Cys Pro Lys Cys Arg Gly Glu
      45              50              55              60
gac ctc cag tct ata agc cca gga agc cgt ctt cga act cag gag aag 303
Asp Leu Gln Ser Ile Ser Pro Gly Ser Arg Leu Arg Thr Gln Glu Lys
      65              70              75
gct cac ccc gag gtg gct gag gct gga att ggg tgc ccc ttt gca ggt 351
Ala His Pro Glu Val Ala Glu Ala Gly Ile Gly Cys Pro Phe Ala Gly
      80              85              90
gtc ggc tgc tcc ttc aag gga agc cca cag tct gtg caa gag cat gag 399
Val Gly Cys Ser Phe Lys Gly Ser Pro Gln Ser Val Gln Glu His Glu
      95              100              105
gtc acc tcc cag acc tcc cac cta aac ctg ctg ttg ggg ttc atg aaa 447
Val Thr Ser Gln Thr Ser His Leu Asn Leu Leu Leu Gly Phe Met Lys
```

110	115	120	
cag tgg aag gcc cgg ctg ggc tgt ggc ctg gag tct ggg ccc atg gcc Gln Trp Lys Ala Arg Leu Gly Cys Gly Leu Glu Ser Gly Pro Met Ala 125 130 135 140			495
ctg gag cag aac ctg tca gac ctg cag ctg cag gca gcc gtg gaa gtg Leu Glu Gln Asn Leu Ser Asp Leu Gln Leu Gln Ala Ala Val Glu Val 145 150 155			543
gcg ggg gac ctg gag gtc gat tgc tac cgg gca ccc tgc tcc gag agc Ala Gly Asp Leu Glu Val Asp Cys Tyr Arg Ala Pro Cys Ser Glu Ser 160 165 170			591
cag gag gag ctg gcc ctg cag cac ttc atg aag gag aag ctt ctg gct Gln Glu Leu Ala Leu Gln His Phe Met Lys Glu Lys Leu Leu Ala 175 180 185			639
gag ctg gag ggg aag ctg cgt gtg ttt gag aac att gtt gct gtc ctc Glu Leu Glu Gly Lys Leu Arg Val Phe Glu Asn Ile Val Ala Val Leu 190 195 200			687
aac aag gag gtg gag gcc tcc cac ctg gcc ctg gcc acc tct atc cac Asn Lys Glu Val Glu Ala Ser His Leu Ala Leu Ala Thr Ser Ile His 205 210 215 220			735
cag agc cag ctg gac cgt gag cgc atc ctg agc ttg gag cag agg gtg Gln Ser Gln Leu Asp Arg Glu Arg Ile Leu Ser Leu Glu Gln Arg Val 225 230 235			783
gtg gag ctt cag cag acc ctg gcc cag aaa gac cag gcc ctg ggc aag Val Glu Leu Gln Gln Thr Leu Ala Gln Lys Asp Gln Ala Leu Gly Lys 240 245 250			831
ctg gag cag agc ttg cgc ctc atg gag gag gcc tcc ttc gat ggc act Leu Glu Gln Ser Leu Arg Leu Met Glu Glu Ala Ser Phe Asp Gly Thr 255 260 265			879
ttc ctg tgg aag atc acc aat gtc acc agg cgg tgc cat gag tcg gcc Phe Leu Trp Lys Ile Thr Asn Val Thr Arg Arg Cys His Glu Ser Ala 270 275 280			927
tgt ggc agg acc gtc agc ctc ttc tcc cca gcc ttc tac act gcc aag Cys Gly Arg Thr Val Ser Leu Phe Ser Pro Ala Phe Tyr Thr Ala Lys 285 290 295 300			975
tat ggc tac aag ttg tgc ctg cgg ctg tac ctg aat gga gat ggc act Tyr Gly Tyr Lys Leu Cys Leu Arg Leu Tyr Leu Asn Gly Asp Gly Thr 305 310 315			1023
gga aag aga acc cat ctg tcg ctc ttc atc gtg atc atg aga ggg gag Gly Lys Arg Thr His Leu Ser Leu Phe Ile Val Ile Met Arg Gly Glu 320 325 330			1071
tat gat gcg ctg ctg ccg tgg ccc ttc cgg aac aag gtc acc ttc atg Tyr Asp Ala Leu Leu Pro Trp Pro Phe Arg Asn Lys Val Thr Phe Met 335 340 345			1119
ctg ctg gac cag aac aac cgt gag cac gcc att gac gcc ttc cgg cct Leu Leu Asp Gln Asn Asn Arg Glu His Ala Ile Asp Ala Phe Arg Pro 350 355 360			1167
gac cta agc tca gcg tcc ttc cag agg ccc cag agt gaa acc aac gtg			1215

```

Asp Leu Ser Ser Ala Ser Phe Gln Arg Pro Gln Ser Glu Thr Asn Val
365                               370                               375                               380

gcc agt gga tgc cca ctc ttc ttc ccc ctc agc aaa ctg cag tca ccc 1263
Ala Ser Gly Cys Pro Leu Phe Phe Pro Leu Ser Lys Leu Gln Ser Pro
                               385                               390                               395

aag cac gcc tac gtg aag gac gac aca atg ttc ctc aag tgc att gtg 1311
Lys His Ala Tyr Val Lys Asp Asp Thr Met Phe Leu Lys Cys Ile Val
                               400                               405                               410

gag acc agc act tag ggtgggcggg gctcctgagg gagctccaac tcagaaggga 1366
Glu Thr Ser Thr
                               415

gctagccaga ggactgtgat gccctgcctt tggcacccaa gacctcaggg caciaagatg 1426

ggtgaaggct ggcatgatcc aagcaagact gaggggtcga cttcgggctg gccatctggt 1486

taggatggca ggacgtgggc tgggcccaca aaggcaaagg gtccagaagg agacaggcag 1546

agctgctccc ctctgcacgg accatgacgac actgggaggg cagtgaagcca ctccggcccc 1606

gaatgttgag gtggactctc accaaatgag aagaaaatgg aaccaggctt ggaaccgtag 1666

gacccaagca gagaagctct cgggctagga agatctctgc agggccgcca gggagacctg 1726

gacacaggcc tgctctcttt ttctccaggg tcagaaacag gaccgggtgg aagggatggg 1786

gtgccagttt gaatgcagtc tgtccaggct cgtcattgga ggtgaacaag caaaccacga 1846

cggtccact aggacttcaa attggggggt ggatttgaag actttttaagt ttcttccag 1906

cccagaaagt ctctcattct agcctcctgg cccagggtgag tcctagagct acaggggttc 1966

tggaaacatt caggagcttc ctgtcctccc agctcctcac tcaccttcag taacccccac 2026

tggactgacc tgggtccacag ggcacctgcc accctggggc tggcagctca gcttcccaac 2086

acgcaggagc acaccagcc cccacatcct gtgcctccat cagctaaaca ccacgtcact 2146

tcatgcaggt gaaaccagc cactgtgagc tcccagggtg agccagaggc acctcaagaa 2206

gaagaggggc ataaactttc ctcttctctg ctagaggccc cacctttggt gctttccaga 2266

atcccgtaac acctgattaa ctgaggcatc cacttctttc agcagactga tcaggacctc 2326

caagccactg agcaatgtat aaccccaaag ggaattcaaa aaaaaaaaaa aaaa 2380

<210>      2
<211>      2262
<212>      DNA
<213>      Homo sapiens

<220>
<221>      CDS
<222>      (55) .. (1560)

<300>
<308>      U12597 Genbank
<309>      1996-02-16

<400>      2

```

gaattccggc gcgctgcgac cgttggggct ttgttcgcgg gggtcacagc tctc atg	57
Met	
1	
gct gca gct agc gtg acc ccc cct ggc tcc ctg gag ttg cta cag ccc	105
Ala Ala Ala Ser Val Thr Pro Pro Gly Ser Leu Glu Leu Leu Gln Pro	
5 10 15	
ggc ttc tcc aag acc ctc ctg ggg acc aag ctg gaa gcc aag tac ctg	153
Gly Phe Ser Lys Thr Leu Leu Gly Thr Lys Leu Glu Ala Lys Tyr Leu	
20 25 30	
tgc tcc gcc tgc aga aac gtc ctc cgc agg ccc ttc cag gcg cag tgt	201
Cys Ser Ala Cys Arg Asn Val Leu Arg Arg Pro Phe Gln Ala Gln Cys	
35 40 45	
ggc cac cgg tac tgc tcc ttc tgc ctg gcc agc atc ctc agc tct ggg	249
Gly His Arg Tyr Cys Ser Phe Cys Leu Ala Ser Ile Leu Ser Ser Gly	
50 55 60 65	
cct cag aac tgt gct gcc tgt gtt cac gag ggc ata tat gaa gaa ggc	297
Pro Gln Asn Cys Ala Ala Cys Val His Glu Gly Ile Tyr Glu Glu Gly	
70 75 80	
att tct att tta gaa agc agt tgc gcc ttc cca gat aat gct gcc cgc	345
Ile Ser Ile Leu Glu Ser Ser Ser Ala Phe Pro Asp Asn Ala Ala Arg	
85 90 95	
agg gag gtg gag agc ctg ccg gcc gtc tgt ccc agt gat gga tgc acc	393
Arg Glu Val Glu Ser Leu Pro Ala Val Cys Pro Ser Asp Gly Cys Thr	
100 105 110	
tgg aag ggg acc ctg aaa gaa tac gag agc tgc cac gaa ggc cgc tgc	441
Trp Lys Gly Thr Leu Lys Glu Tyr Glu Ser Cys His Glu Gly Arg Cys	
115 120 125	
ccg ctc atg ctg acc gaa tgt ccc gcg tgt aaa ggc ctg gtc cgc ctt	489
Pro Leu Met Leu Thr Glu Cys Pro Ala Cys Lys Gly Leu Val Arg Leu	
130 135 140 145	
ggt gaa aag gag cgc cac ctg gag cac gag tgc ccg gag aga agc ctg	537
Gly Glu Lys Glu Arg His Leu Glu His Glu Cys Pro Glu Arg Ser Leu	
150 155 160	
agc tgc cgg cat tgc cgg gca ccc tgc tgc gga gca gac gtg aag gcg	585
Ser Cys Arg His Cys Arg Ala Pro Cys Cys Gly Ala Asp Val Lys Ala	
165 170 175	
cac cac gag gtc tgc ccc aag ttc ccc tta act tgt gac ggc tgc ggc	633
His His Glu Val Cys Pro Lys Phe Pro Leu Thr Cys Asp Gly Cys Gly	
180 185 190	
aag aag aag atc ccc ccg gag aag ttt cag gac cac gtc aag act tgt	681
Lys Lys Lys Ile Pro Arg Glu Lys Phe Gln Asp His Val Lys Thr Cys	
195 200 205	
ggc aag tgt cga gtc cct tgc aga ttc cac gcc atc ggc tgc ctc gag	729
Gly Lys Cys Arg Val Pro Cys Arg Phe His Ala Ile Gly Cys Leu Glu	
210 215 220 225	
acg gta gag ggt gag aaa cag cag gag cac gag gtg cag tgg ctg cgg	777
Thr Val Glu Gly Glu Lys Gln Gln Glu His Glu Val Gln Trp Leu Arg	
230 235 240	

gag	cac	ctg	gcc	atg	cta	ctg	agc	tcg	gtg	ctg	gag	gca	aag	ccc	ctc	825
Glu	His	Leu	Ala	Met	Leu	Leu	Ser	Ser	Val	Leu	Glu	Ala	Lys	Pro	Leu	
		245						250					255			
ttg	gga	gac	cag	agc	cac	gcg	ggg	tca	gag	ctc	ctg	cag	agg	tgc	gag	873
Leu	Gly	Asp	Gln	Ser	His	Ala	Gly	Ser	Glu	Leu	Leu	Gln	Arg	Cys	Glu	
		260					265					270				
agc	ctg	gag	aag	aag	acg	gcc	act	ttt	gag	aac	att	gtc	tgc	gtc	ctg	921
Ser	Leu	Glu	Lys	Lys	Thr	Ala	Thr	Phe	Glu	Asn	Ile	Val	Cys	Val	Leu	
	275					280					285					
aac	cgg	gag	gtg	gag	agg	gtg	gcc	atg	act	gcc	gag	gcc	tgc	agc	cgg	969
Asn	Arg	Glu	Val	Glu	Arg	Val	Ala	Met	Thr	Ala	Glu	Ala	Cys	Ser	Arg	
290					295					300					305	
cag	cac	cgg	ctg	gac	caa	gac	aag	att	gaa	gcc	ctg	agt	agc	aag	gtg	1017
Gln	His	Arg	Leu	Asp	Gln	Asp	Lys	Ile	Glu	Ala	Leu	Ser	Ser	Lys	Val	
			310						315					320		
cag	cag	ctg	gag	agg	agc	att	ggc	ctc	aag	gac	ctg	gcg	atg	gct	gac	1065
Gln	Gln	Leu	Glu	Arg	Ser	Ile	Gly	Leu	Lys	Asp	Leu	Ala	Met	Ala	Asp	
		325						330					335			
ttg	gag	cag	aag	gtc	agg	ccc	ttc	cag	gcg	cag	tgt	ggc	cac	cgg	tac	1113
Leu	Glu	Gln	Lys	Val	Arg	Pro	Phe	Gln	Ala	Gln	Cys	Gly	His	Arg	Tyr	
		340					345					350				
tgc	tcc	ttc	tgc	ctg	gcc	agc	atc	ctc	agg	aag	ctc	cag	gaa	gct	gtg	1161
Cys	Ser	Phe	Cys	Leu	Ala	Ser	Ile	Leu	Arg	Lys	Leu	Gln	Glu	Ala	Val	
	355					360					365					
gct	ggc	cgc	ata	ccc	gcc	atc	ttc	tcc	cca	gcc	ttc	tac	acc	agc	agg	1209
Ala	Gly	Arg	Ile	Pro	Ala	Ile	Phe	Ser	Pro	Ala	Phe	Tyr	Thr	Ser	Arg	
370					375					380					385	
tac	ggc	tac	aag	atg	tgt	ctg	cgt	atc	tac	ctg	aac	ggc	gac	ggc	acc	1257
Tyr	Gly	Tyr	Lys	Met	Cys	Leu	Arg	Ile	Tyr	Leu	Asn	Gly	Asp	Gly	Thr	
			390					395						400		
ggg	cga	gga	aca	cac	ctg	tcc	ctc	ttc	ttt	gtg	gtg	atg	aag	ggc	ccg	1305
Gly	Arg	Gly	Thr	His	Leu	Ser	Leu	Phe	Phe	Val	Val	Met	Lys	Gly	Pro	
			405					410					415			
aat	gac	gcc	ctg	ctg	cgg	tgg	ccc	ttc	aac	cag	aag	gtg	acc	tta	atg	1353
Asn	Asp	Ala	Leu	Leu	Arg	Trp	Pro	Phe	Asn	Gln	Lys	Val	Thr	Leu	Met	
		420					425					430				
ctg	ctc	gac	cag	aat	aac	cgg	gag	cac	gtg	att	gac	gcc	ttc	agg	ccc	1401
Leu	Leu	Asp	Gln	Asn	Asn	Arg	Glu	His	Val	Ile	Asp	Ala	Phe	Arg	Pro	
		435				440					445					
gac	gtg	act	tca	tcc	tct	ttt	cag	agg	cca	gtc	aac	gac	atg	aac	atc	1449
Asp	Val	Thr	Ser	Ser	Ser	Phe	Gln	Arg	Pro	Val	Asn	Asp	Met	Asn	Ile	
	450				455					460					465	
gca	agc	ggc	tgc	ccc	ctc	ttc	tgc	ccc	gtc	tcc	aag	atg	gag	gca	aag	1497
Ala	Ser	Gly	Cys	Pro	Leu	Phe	Cys	Pro	Val	Ser	Lys	Met	Glu	Ala	Lys	
			470					475						480		
aat	tcc	tac	gtg	cgg	gac	gat	gcc	atc	ttc	atc	aag	gcc	att	gtg	gac	1545
Asn	Ser	Tyr	Val	Arg	Asp	Asp	Ala	Ile	Phe	Ile	Lys	Ala	Ile	Val	Asp	
			485					490					495			

ctg aca ggg ctc taa ctgcccccta ctggtgtctg ggggttgggg gcagccaggc 1600
 Leu Thr Gly Leu
 500

acagccggct cacggagggg ccaccacgct gggccagggc ctcactgtac aagtgggcag 1660
 gggccccgct tgggcgcttg ggaggggtgtc ggccctgcagc caagttcact gtcacggggg 1720
 aaggagccac cagccagtc cagatttca gagactgcgg aggggcttgg cagacggtct 1780
 tagccaaggg ctgtggtggc attggccgag ggtcttcggg tgcttcccag cacaagctgc 1840
 ccttgctgtc ctgtgcagtg aaggagaggg ccctgggtgg gggacactca gagtgggagc 1900
 acatcccagc agtgcccatg tagcaggagc acagtggatg gccttggtgtc ctcggggcat 1960
 gacaggcaga aacgagggct gctccaggag aagggcctcc tgctggccag agcaaggaag 2020
 gctgagcagc ttggttctcc cctctggccc ctggagagaa gggagcattc ctagaccct 2080
 ggggtgcttgt ctgcacagag ctctggtctg tgccacctg gccaggctgg ctgtgggagg 2140
 gtctggtccc acgccgcctc tgctcagaca ctgtgtggga gggcacagca cagctgcggg 2200
 taaagtgtga gagcttgcca tccagctcac gaagacagag ttattaaacc attacaaatc 2260
 tc 2262

<210> 3
 <211> 2455
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (218) .. (1924)

<300>
 <308> U21092
 <309> 1995-03-23

<400> 3

cgggggagcg cggcgcgggc gccgcgtgcg cgagccgggg ttgcagccca gccgggactt 60
 tccagccggc ggcagccgcg gcggtcgctg gctcttcccc gcccccgctc atggggcagc 120
 ccggggagca gaacgctgcg gaccgcggcg gaggacgcgc ccggcgcccc tgagccggcc 180
 gagcggcgac ggaccgcgag aactcctctt tcctaaa atg gag tcg agt aaa aag 235
 Met Glu Ser Ser Lys Lys
 1 5

atg gac tct cct ggc gcg ctg cag act aac ccg ccg cta aag ctg cac 283
 Met Asp Ser Pro Gly Ala Leu Gln Thr Asn Pro Pro Leu Lys Leu His
 10 15 20

act gac cgt agt gct ggg acg cca gtt ttt gtc cct gaa caa gga ggt 331
 Thr Asp Arg Ser Ala Gly Thr Pro Val Phe Val Pro Glu Gln Gly Gly
 25 30 35

tac aag gaa aag ttt gtg aag acc gtg gag gac aag tac aag tgt gag 379
 Tyr Lys Glu Lys Phe Val Lys Thr Val Glu Asp Lys Tyr Lys Cys Glu

40					45					50						
aag Lys 55	tgc Cys	cac His	ctg Leu	gtg Val	ctg Leu 60	tgc Cys	agc Ser	ccg Pro	aag Lys	cag Gln 65	acc Thr	gag Glu	tgt Cys	ggg Gly 70	cac His	427
cgc Arg	ttc Phe	tgc Cys	gag Glu	agc Ser 75	tgc Cys	atg Met	gcg Ala	gcc Ala	ctg Leu 80	ctg Leu	agc Ser	tct Ser	tca Ser	agt Ser 85	cca Pro	475
aaa Lys	tgt Cys	aca Thr	gcg Ala 90	tgt Cys	caa Gln	gag Glu	agc Ser	atc Ile 95	ggt Val	aaa Lys	gat Asp	aag Lys	gtg Val 100	ttt Phe	aag Lys	523
gat Asp	aat Asn	tgc Cys 105	tgc Cys	aag Lys	aga Arg	gaa Glu	att Ile 110	ctg Leu	gct Ala	ctt Leu	cag Gln	atc Ile 115	tat Tyr	tgt Cys	cgg Arg	571
aat Asn 120	gaa Glu	agc Ser	aga Arg	ggg Gly	tgt Cys	gca Ala 125	gag Glu	cag Gln	tta Leu	acg Thr	ctg Leu 130	gga Gly	cat His	ctg Leu	ctg Leu	619
gtg Val 135	cat His	tta Leu	aaa Lys	aat Asn	gat Asp 140	tgc Cys	cat His	ttt Phe	gaa Glu 145	gaa Glu	ctt Leu	cca Pro	tgt Cys	gtg Val	cgt Arg 150	667
cct Pro	gac Asp	tgc Cys	aaa Lys 155	gaa Glu	aag Lys	gtc Val	ttg Leu	agg Arg	aaa Lys 160	gac Asp	ctg Leu	cga Arg	gac Asp	cac His 165	gtg Val	715
gag Glu	aag Lys	gcg Ala	tgt Cys 170	aaa Lys	tac Tyr	cgg Arg	gaa Glu	gcc Ala	aca Thr 175	tgc Cys	agc Ser	cac His	tgc Cys 180	aag Lys	agt Ser	763
cag Gln	gtt Val	ccg Pro 185	atg Met	atc Ile	gcg Ala	ctg Leu	cag Gln	aaa Lys	cac His	gaa Glu	gac Asp	acc Thr 195	gac Asp	tgt Cys	ccc Pro	811
tgc Cys 200	gtg Val	gtg Val	gtg Val	tcc Ser	tgc Cys	cct Pro 205	cac His	aag Lys	tgc Cys	agc Ser	gtc Val 210	cag Gln	act Thr	ctc Leu	ctg Leu	859
agg Arg 215	agc Ser	gag Glu	ttg Leu	agt Ser	gca Ala 220	cac His	ttg Leu	tca Ser	gag Glu	tgt Cys 225	gtc Val	aat Asn	gcc Ala	ccc Pro 230	agc Ser	907
acc Thr	tgt Cys	agt Ser	ttt Phe 235	aag Lys	cgc Arg	tat Tyr	ggc Gly	tgc Cys	gtt Val 240	ttt Phe	cag Gln	ggg Gly	aca Thr	aac Asn 245	cag Gln	955
cag Gln	atc Ile	aag Lys	gcc Ala 250	cac His	gag Glu	gcc Ala	agc Ser	tcc Ser 255	gcc Ala	gtg Val	cag Gln	cac His	gtc Val 260	aac Asn	ctg Leu	1003
ctg Leu	aag Lys	gag Glu 265	tgg Trp	agc Ser	aac Asn	tcg Ser	ctc Leu	gaa Glu	aag Lys	aag Lys	gtt Val 275	tcc Ser	ttg Leu	ttg Leu	cag Gln	1051
aat Asn 280	gaa Glu	agt Ser	gta Val	gaa Glu	aaa Lys 285	aac Asn	aag Lys	agc Ser	ata Ile	caa Gln	agt Ser 290	ttg Leu	cac His	aat Asn	cag Gln	1099
ata Gln	tgt Glu	agc Ser	ttt Val	gaa Glu	att Glu	gaa Glu	att Glu	gag Glu	aga Glu	caa Glu	aag Glu	gaa Glu	atg Glu	ctt Glu	cga Glu	1147

Ile 295	Cys	Ser	Phe	Glu	Ile 300	Glu	Ile	Glu	Arg	Gln 305	Lys	Glu	Met	Leu	Arg 310	
aat Asn	aat Asn	gaa Glu	tcc Ser	aaa Lys 315	atc Ile	ctt Leu	cat His	tta Leu	cag Gln 320	cga Arg	gtg Val	atc Ile	gac Asp	agc Ser 325	caa Gln	1195
gca Ala	gag Glu	aaa Lys 330	ctg Leu	aag Lys 335	gag Glu	ctt Leu	gac Asp	aag Lys 335	gag Glu	atc Ile	cgg Arg	ccc Pro	ttc Phe 340	cgg Arg	cag Gln	1243
aac Asn	tgg Trp 345	gag Glu	gaa Glu	gca Ala	gac Asp	agc Ser	atg Met 350	aag Lys	agc Ser	agc Ser	gtg Val	gag Glu 355	tcc Ser	ctc Leu	cag Gln	1291
aac Asn 360	cgc Arg	gtg Val	acc Thr	gag Glu	ctg Leu 365	gag Glu	agc Ser	gtg Val	gac Asp	aag Lys 370	agt Ser	gcg Ala	ggg Gly	caa Gln	gtg Val	1339
gct Ala 375	cgg Arg	aac Asn	aca Thr	ggc Gly	ctg Leu 380	ctg Leu	gag Glu	tcc Ser	cag Gln	ctg Leu 385	agc Ser	cgg Arg	cat His	gac Asp	cag Gln 390	1387
atg Met	ctg Leu	agt Ser	gtg Val	cac His 395	gac Asp	atc Ile	cgc Arg	cta Leu	gcc Ala 400	gac Asp	atg Met	gac Asp	ctg Leu	cgc Arg 405	ttc Phe	1435
cag Gln	gtc Val	ctg Leu	gag Glu	acc Thr 410	gcc Ala	agc Ser	tac Tyr	aat Asn 415	gga Gly	gtg Val	ctc Leu	atc Ile	tgg Trp 420	aag Lys	att Ile	1483
cgc Arg	gac Asp	tac Tyr 425	aag Lys	cgg Arg	cgg Arg	aag Lys	cag Gln 430	gag Glu	gcc Ala	gtc Val	atg Met	ggg Gly 435	aag Lys	acc Thr	ctg Leu	1531
tcc Ser 440	ctt Leu	tac Tyr	agc Ser	cag Gln	cct Pro	ttc Phe 445	tac Tyr	act Thr	ggt Gly	tac Tyr	ttt Phe 450	ggt Gly	tat Tyr	aag Lys	atg Met	1579
tgt Cys 455	gcc Ala	agg Arg	gtc Val	tac Tyr	ctg Leu 460	aac Asn	ggg Gly	gac Asp	ggg Gly	atg Met 465	ggg Gly	aag Lys	ggg Gly	acg Thr	cac His 470	1627
ttg Leu	tgc Ser	ctg Leu	ttt Phe	ttt Phe 475	gtc Val	atc Ile	atg Met	cgt Arg	gga Gly 480	gaa Glu	tat Tyr	gat Asp	gcc Ala	ctg Leu 485	ctt Leu	1675
cct Pro	tgg Trp	ccg Pro	ttt Phe 490	aag Lys	cag Gln	aaa Lys	gtg Val	aca Thr 495	ctc Leu	atg Met	ctg Leu	atg Met	gat Asp 500	cag Gln	ggg Gly	1723
tcc Ser	tct Ser	cga Arg 505	cgt Arg	cat His	ttg Leu	gga Gly	gat Asp 510	gca Ala	ttc Phe	aag Lys	ccc Pro	gac Asp 515	ccc Pro	aac Asn	agc Ser	1771
agc Ser 520	agc Ser	ttc Phe	aag Lys	aag Lys	ccc Pro	act Thr 525	gga Gly	gag Glu	atg Met	aat Asn	atc Ile 530	gcc Ala	tct Ser	ggc Gly	tgc Cys	1819
cca Pro 535	gtc Val	ttt Phe	gtg Val	gcc Ala	caa Gln 540	act Thr	gtt Val	cta Leu	gaa Glu	aat Asn 545	ggg Gly	aca Thr	tat Tyr	att Ile	aaa Lys 550	1867

gat gat aca att ttt att aaa gtc ata gtg gat act tcg gat ctg ccc 1915
 Asp Asp Thr Ile Phe Ile Lys Val Ile Val Asp Thr Ser Asp Leu Pro
 555 560 565

gat ccc tga taagtagctg gggaggtgga tttagcagaa ggcaactcct 1964
 Asp Pro

ctgggggatt tgaaccggtc tgtcttcact gaggtcctcg cgctcagaaa aggaccttgt 2024

gagacggagg aagcggcaga aggcggacgc gtgccggcgg gaggagccac gcgtgagcac 2084

acctgacacg ttttataata gactagccac acttcactct gaagaattat ttatccttca 2144

acaagataaa tattgctgtc agagaagggtt ttcattttca tttttaaaga tctagttaat 2204

taaggtggaa aacatatatg ctaaacaaaa gaaacatgat ttttcttcct taaacttgaa 2264

caccaaaaaa acacacacac acacacacgt ggggatagct ggacatgtca gcatgttaag 2324

taaaaggaga atttatgaaa tagtaatgca attctgatat cttctttcta aaattcaaga 2384

gtgcaatttt gtttcaaata cagtatattg tctattttta aggcctccaa aaaaaaaaaa 2444

aattccggcc g 2455

<210> 4
 <211> 1999
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (86) .. (1498)

<300>
 <308> X80200
 <309> 1998-04-15

<400> 4

gccgggagcg ccgctccagc gaggcgcggg ctgtggggcc gccgcgtgcc tggccccgct 60

cgcccgtgcc ggccgctcgc ccgcc atg cct ggc ttc gac tac aag ttc ctg 112
 Met Pro Gly Phe Asp Tyr Lys Phe Leu
 1 5

gag aag ccc aag cga cgg ctg ctg tgc cca ctg tgc ggg aag ccc atg 160
 Glu Lys Pro Lys Arg Arg Leu Leu Cys Pro Leu Cys Gly Lys Pro Met
 10 15 20 25

cgc gag cct gtg cag gtt tcc acc tgc ggc cac cgt ttc tgc gat acc 208
 Arg Glu Pro Val Gln Val Ser Thr Cys Gly His Arg Phe Cys Asp Thr
 30 35 40

tgc ctg cag gag ttc ctg agt gaa gga gtc ttc aag tgc cct gag gac 256
 Cys Leu Gln Glu Phe Leu Ser Glu Gly Val Phe Lys Cys Pro Glu Asp
 45 50 55

cag ctt cct ctg gac tat gcc aag atc tac cca gac ccg gag ctg gaa 304
 Gln Leu Pro Leu Asp Tyr Ala Lys Ile Tyr Pro Asp Pro Glu Leu Glu
 60 65 70

gta caa gta ttg ggc ctg cct atc cgc tgc atc cac agt gag gag ggc 352

Val	Gln	Val	Leu	Gly	Leu	Pro	Ile	Arg	Cys	Ile	His	Ser	Glu	Glu	Gly		
	75					80					85						
tgc	cgc	tgg	agt	ggg	cca	cta	cgt	cat	cta	cag	ggc	cac	ctg	aat	acc	400	
Cys	Arg	Trp	Ser	Gly	Pro	Leu	Arg	His	Leu	Gln	Gly	His	Leu	Asn	Thr	105	
	90				95					100							
tgc	agc	ttc	aat	gtc	att	ccc	tgc	cct	aat	cgc	tgc	ccc	atg	aag	ctg	448	
Cys	Ser	Phe	Asn	Val	Ile	Pro	Cys	Pro	Asn	Arg	Cys	Pro	Met	Lys	Leu		
				110					115					120			
agc	cgc	cgt	gat	cta	cct	gca	cac	ttg	cag	cat	gac	tgc	ccc	aag	cgg	496	
Ser	Arg	Arg	Asp	Leu	Pro	Ala	His	Leu	Gln	His	Asp	Cys	Pro	Lys	Arg		
			125					130					135				
cgc	ctc	aag	tgc	gag	ttt	tgt	ggc	tgt	gac	ttc	agt	ggg	gag	gcc	tat	544	
Arg	Leu	Lys	Cys	Glu	Phe	Cys	Gly	Cys	Asp	Phe	Ser	Gly	Glu	Ala	Tyr		
		140					145					150					
gag	agc	cat	gag	ggt	atg	tgc	ccc	cag	gag	agt	gtc	tac	tgt	gag	aat	592	
Glu	Ser	His	Glu	Gly	Met	Cys	Pro	Gln	Glu	Ser	Val	Tyr	Cys	Glu	Asn		
	155					160					165						
aag	tgt	ggt	gcc	cgc	atg	atg	cgg	ggg	ctg	ctg	gcc	cag	cat	gcc	acc	640	
Lys	Cys	Gly	Ala	Arg	Met	Met	Arg	Gly	Leu	Leu	Ala	Gln	His	Ala	Thr		
	170				175					180					185		
tct	gag	tgc	ccc	aag	cgc	act	cag	ccc	tgc	acc	tac	tgc	act	aag	gag	688	
Ser	Glu	Cys	Pro	Lys	Arg	Thr	Gln	Pro	Cys	Thr	Tyr	Cys	Thr	Lys	Glu		
			190						195					200			
ttc	gtc	ttt	gac	acc	atc	cag	agc	cac	cag	tac	cag	tgc	cca	agg	ctg	736	
Phe	Val	Phe	Asp	Thr	Ile	Gln	Ser	His	Gln	Tyr	Gln	Cys	Pro	Arg	Leu		
			205					210					215				
cct	gtt	gcc	tgc	ccc	aac	caa	tgt	ggt	gtg	ggc	act	gtg	gct	cgg	gag	784	
Pro	Val	Ala	Cys	Pro	Asn	Gln	Cys	Gly	Val	Gly	Thr	Val	Ala	Arg	Glu		
		220					225					230					
gac	ctg	cca	ggc	cat	ctg	aag	gac	agc	tgt	aac	acc	gcc	ctg	gtg	ctc	832	
Asp	Leu	Pro	Gly	His	Leu	Lys	Asp	Ser	Cys	Asn	Thr	Ala	Leu	Val	Leu		
	235					240					245						
tgc	cca	ttc	aaa	gac	tcc	ggc	tgc	aag	cac	agg	tgc	cct	aag	ctg	gca	880	
Cys	Pro	Phe	Lys	Asp	Ser	Gly	Cys	Lys	His	Arg	Cys	Pro	Lys	Leu	Ala		
	250					255				260					265		
atg	gca	cgg	cat	gtg	gag	gag	agt	gtg	aag	cca	cat	ctg	gcc	atg	atg	928	
Met	Ala	Arg	His	Val	Glu	Glu	Ser	Val	Lys	Pro	His	Leu	Ala	Met	Met		
				270					275					280			
tgt	gcc	ctg	gtg	agc	cgg	caa	cgg	cag	gag	ctg	cag	gag	ctt	cgg	cga	976	
Cys	Ala	Leu	Val	Ser	Arg	Gln	Arg	Gln	Glu	Leu	Gln	Glu	Leu	Arg	Arg		
			285					290					295				
gag	ctg	gag	gag	cta	tca	gtg	ggc	agt	gat	ggc	gtg	ctc	atc	tgg	aag	1024	
Glu	Leu	Glu	Glu	Leu	Ser	Val	Gly	Ser	Asp	Gly	Val	Leu	Ile	Trp	Lys		
		300					305					310					
att	ggc	agc	tat	gga	cgg	cgg	cta	cag	gag	gcc	aag	gcc	aag	ccc	aac	1072	
Ile	Gly	Ser	Tyr	Gly	Arg	Arg	Leu	Gln	Glu	Ala	Lys	Ala	Lys	Pro	Asn		
	315					320					325						

ctt gag tgc ttc agc cca gcc ttc tac aca cat aag tat ggt tac aag	1120
Leu Glu Cys Phe Ser Pro Ala Phe Tyr Thr His Lys Tyr Gly Tyr Lys	
330 335 340 345	
ctg cag gtg tct gca ttc ctc aat ggc aat ggc agt ggt gag ggc aca	1168
Leu Gln Val Ser Ala Phe Leu Asn Gly Asn Gly Ser Gly Glu Gly Thr	
350 355 360	
cac ctc tca ctg tac att cgt gtg ctg cct ggt gcc ttt gac aat ctc	1216
His Leu Ser Leu Tyr Ile Arg Val Leu Pro Gly Ala Phe Asp Asn Leu	
365 370 375	
ctt gag tgg ccc ttt gcc cgc cgt gtc acc ttc tcc ctg ctg gat cag	1264
Leu Glu Trp Pro Phe Ala Arg Arg Val Thr Phe Ser Leu Leu Asp Gln	
380 385 390	
agc gac cct ggg ctg gct aaa cca cag cac gtc act gag acc ttc cac	1312
Ser Asp Pro Gly Leu Ala Lys Pro Gln His Val Thr Glu Thr Phe His	
395 400 405	
ccc gac cca aac tgg aag aat ttc cag aag cca ggc acg tgg cgg ggc	1360
Pro Asp Pro Asn Trp Lys Asn Phe Gln Lys Pro Gly Thr Trp Arg Gly	
410 415 420 425	
tcc ctg gat gag agt tct ctg ggc ttt ggt tat ccc aag ttc atc tcc	1408
Ser Leu Asp Glu Ser Ser Leu Gly Phe Gly Tyr Pro Lys Phe Ile Ser	
430 435 440	
cac cag gac att cga aag cga aac tat gtg cgg gat gat gca gtc ttc	1456
His Gln Asp Ile Arg Lys Arg Asn Tyr Val Arg Asp Asp Ala Val Phe	
445 450 455	
atc cgt gct gct gtt gaa ctg ccc cgg aag atc ctc agc tga	1498
Ile Arg Ala Ala Val Glu Leu Pro Arg Lys Ile Leu Ser	
460 465 470	
gtgcaggtgg ggttcgaggg gaaaggacga tggggcatga cctcagtcag gcactggctg	1558
aacttgagga gggggccgga cccccgtcag ctgcttctgc tgcctaggtt ctgttacccc	1618
atcctccctc cccagccac caccctcagg tgcctccaat tgggtgcttca gccctggccc	1678
ctgtggggaa caggtcttgg ggtcatgaag ggctggaaac aagtgacccc agggcctgtc	1738
tcccttcttg ggtagggcag acatgccttg gtgccggtca cactctacac ggactgaggt	1798
gcctgctcag gtgctatgtc ccaagagcca taaggggggtg ggaattgggg agggagaaag	1858
ggtagttcaa agagtctgtc ttgagatctg attttttccc cctttacctt gctgtgcccc	1918
ctctggttat ttatttcctt agtgccagga gggcacagca ggggagccct gatttttaat	1978
aaatccggaa ttgtatttat t	1999
<210>	5
<211>	3993
<212>	DNA
<213>	Homo sapiens
<220>	
<221>	CDS
<222>	(55) .. (1728)

<300>

<308> AB000509

<309> 1998-03-25

<400> 5

```
gcagcagccg cgcctgcaga ccggcctcgc ggagcccgcg cgccgagccc caca atg 57
                                     Met
                                     1

gct tat tca gaa gag cat aaa ggt atg ccc tgt ggt ttc atc cgc cag 105
Ala Tyr Ser Glu Glu His Lys Gly Met Pro Cys Gly Phe Ile Arg Gln
                    5                      10                      15

aat tcc ggc aac tcc att tcc ttg gac ttt gag ccc agt ata gag tac 153
Asn Ser Gly Asn Ser Ile Ser Leu Asp Phe Glu Pro Ser Ile Glu Tyr
                    20                      25                      30

cag ttt gtg gag cgg ttg gaa gag cgc tac aaa tgt gcc ttc tgc cac 201
Gln Phe Val Glu Arg Leu Glu Glu Arg Tyr Lys Cys Ala Phe Cys His
                    35                      40                      45

tcg gtg ctt cac aac ccc cac cag aca gga tgt ggg cac cgc ttc tgc 249
Ser Val Leu His Asn Pro His Gln Thr Gly Cys Gly His Arg Phe Cys
                    50                      55                      60                      65

cag cac tgc atc ctg tcc ctg aga gaa tta aac aca gtg cca atc tgc 297
Gln His Cys Ile Leu Ser Leu Arg Glu Leu Asn Thr Val Pro Ile Cys
                    70                      75                      80

cct gta gat aaa gag gtc atc aaa tct cag gag gtt ttt aaa gac aat 345
Pro Val Asp Lys Glu Val Ile Lys Ser Gln Glu Val Phe Lys Asp Asn
                    85                      90                      95

tgt tgc aaa aga gaa gtc ctc aac tta tat gta tat tgc agc aat gct 393
Cys Cys Lys Arg Glu Val Leu Asn Leu Tyr Val Tyr Cys Ser Asn Ala
                    100                      105                      110

cct gga tgt aat gcc aag gtt att ctg ggc cgg tac cag gat cac ctt 441
Pro Gly Cys Asn Ala Lys Val Ile Leu Gly Arg Tyr Gln Asp His Leu
                    115                      120                      125

cag cag tgc tta ttt caa cct gtg cag tgt tct aat gag aag tgc cgg 489
Gln Gln Cys Leu Phe Gln Pro Val Gln Cys Ser Asn Glu Lys Cys Arg
                    130                      135                      140                      145

gag cca gtc cta cgg aaa gac ctg aaa gag cat ttg agt gca tcc tgt 537
Glu Pro Val Leu Arg Lys Asp Leu Lys Glu His Leu Ser Ala Ser Cys
                    150                      155                      160

cag ttt cga aag gaa aaa tgc ctt tat tgc aaa aag gat gtg gta gtc 585
Gln Phe Arg Lys Glu Lys Cys Leu Tyr Cys Lys Lys Asp Val Val Val
                    165                      170                      175

atc aat cta cag aat cat gag gaa aac ttg tgt cct gaa tac cca gta 633
Ile Asn Leu Gln Asn His Glu Glu Asn Leu Cys Pro Glu Tyr Pro Val
                    180                      185                      190

ttt tgt ccc aac aat tgt gcg aag att att cta aaa act gag gta gat 681
Phe Cys Pro Asn Asn Cys Ala Lys Ile Ile Leu Lys Thr Glu Val Asp
                    195                      200                      205

gaa cac ctg gct gta tgt cct gaa gct gag caa gac tgt cct ttt aag 729
```

Glu 210	His	Leu	Ala	Val	Cys 215	Pro	Glu	Ala	Glu	Gln 220	Asp	Cys	Pro	Phe	Lys 225	
cac	tat	ggc	tgt	gct	gta	acg	gat	aaa	cgg	agg	aac	ctg	cag	caa	cat	777
His	Tyr	Gly	Cys	Ala 230	Val	Thr	Asp	Lys 235	Arg	Arg	Asn	Leu	Gln	His 240		
gag	cat	tca	gcc	tta	cgg	gag	cac	atg	cgt	ttg	gtt	tta	gaa	aag	aat	825
Glu	His	Ser	Ala 245	Leu	Arg	Glu	His	Met 250	Arg	Leu	Val	Leu	Glu	Lys	Asn	
gtc	caa	tta	gaa	gaa	cag	att	tct	gac	tta	cac	aag	agc	cta	gaa	cag	873
Val	Gln	Leu 260	Glu	Glu	Gln	Ile	Ser 265	Asp	Leu	His	Lys	Ser 270	Leu	Glu	Gln	
aaa	gaa	agt	aaa	atc	cag	cag	cta	gca	gaa	act	ata	aag	aaa	ctt	gaa	921
Lys	Glu	Ser	Lys	Ile	Gln	Gln	Leu 280	Ala	Glu	Thr	Ile 285	Lys	Lys	Leu	Glu	
aag	gag	ttc	aag	cag	ttt	gca	cag	ttg	ttt	ggc	aaa	aat	gga	agc	ttc	969
Lys	Glu	Phe	Lys	Gln	Phe 295	Ala	Gln	Leu	Phe	Gly 300	Lys	Asn	Gly	Ser	Phe 305	
ctc	cca	aac	atc	cag	gtt	ttt	gcc	agt	cac	att	gac	aag	tca	gct	tggt	1017
Leu	Pro	Asn	Ile	Gln 310	Val	Phe	Ala	Ser	His 315	Ile	Asp	Lys	Ser	Ala 320	Trp	
cta	gaa	gct	caa	gtg	cat	caa	tta	tta	caa	atg	gtt	aac	cag	caa	caa	1065
Leu	Glu	Ala	Gln 325	Val	His	Gln	Leu 330	Leu	Gln	Met	Val	Asn	Gln	Gln 335	Gln	
aat	aaa	ttt	gac	ctg	aga	cct	ttg	atg	gaa	gca	gtt	gat	aca	gtg	aaa	1113
Asn	Lys	Phe 340	Asp	Leu	Arg	Pro	Leu 345	Met	Glu	Ala	Val	Asp 350	Thr	Val	Lys	
cag	aaa	att	acc	ctg	cta	gaa	aac	aat	gat	caa	aga	tta	gcc	gtt	tta	1161
Gln	Lys 355	Ile	Thr	Leu	Leu	Glu 360	Asn	Asn	Asp	Gln	Arg 365	Leu	Ala	Val	Leu	
gaa	gag	gaa	act	aac	aaa	cat	gat	acc	cac	att	aat	att	cat	aaa	gca	1209
Glu	Glu	Glu	Thr	Asn 375	Lys	His	Asp	Thr	His 380	Ile	Asn	Ile	His	Lys 385	Ala	
cag	ctg	agt	aaa	aat	gaa	gag	cga	ttt	aaa	ctg	ctg	gag	ggt	act	tgc	1257
Gln	Leu	Ser	Lys 390	Asn	Glu	Glu	Arg	Phe	Lys 395	Leu	Leu	Glu	Gly	Thr 400	Cys	
tat	aat	gga	aag	ctc	att	tggt	aag	gtg	aca	gat	tac	aag	atg	aag	aag	1305
Tyr	Asn	Gly 405	Lys	Leu	Ile	Trp	Lys	Val 410	Thr	Asp	Tyr	Lys	Met 415	Lys	Lys	
aga	gag	gag	gtg	gat	ggg	cac	aca	gtg	tcc	atc	ttc	agc	cag	tcc	ttc	1353
Arg	Glu	Ala 420	Val	Asp	Gly	His	Thr 425	Val	Ser	Ile	Phe	Ser 430	Gln	Ser	Phe	
tac	acc	agc	cgc	tgt	ggc	tac	cgg	ctc	tgt	gct	aga	gca	tac	ctg	aat	1401
Tyr	Thr 435	Ser	Arg	Cys	Gly	Tyr 440	Arg	Leu	Cys	Ala	Arg 445	Ala	Tyr	Leu	Asn	
ggg	gat	ggg	tca	ggg	agg	ggg	tca	cac	ctg	tcc	cta	tac	ttt	gtg	gtc	1449
Gly 450	Asp	Gly	Ser	Gly 455	Arg	Gly	Ser	His	Leu 460	Ser	Leu	Tyr	Phe	Val 465	Val	

atg cga gga gag ttt gac tca ctg ttg cag tgg cca ttc agg cag agg	1497
Met Arg Gly Glu Phe Asp Ser Leu Leu Gln Trp Pro Phe Arg Gln Arg	
470 475 480	
gtg acc ctg atg ctt ctg gac cag agt ggc aaa aag aac att atg gag	1545
Val Thr Leu Met Leu Leu Asp Gln Ser Gly Lys Lys Asn Ile Met Glu	
485 490 495	
acc ttc aaa cct gac ccc aat agc agc agc ttt aaa aga cct gat ggg	1593
Thr Phe Lys Pro Asp Pro Asn Ser Ser Ser Phe Lys Arg Pro Asp Gly	
500 505 510	
gag atg aac att gca tct ggc tgt ccc cgc ttt gtg gct cat tct gtt	1641
Glu Met Asn Ile Ala Ser Gly Cys Pro Arg Phe Val Ala His Ser Val	
515 520 525	
ttg gag aat gcc aag aac gcc tac att aaa gat gac act ctg ttc ttg	1689
Leu Glu Asn Ala Lys Asn Ala Tyr Ile Lys Asp Asp Thr Leu Phe Leu	
530 535 540 545	
aaa gtg gcc gtg gac tta act gac ctg gag gat ctc tag tcaactgttat	1738
Lys Val Ala Val Asp Leu Thr Asp Leu Glu Asp Leu	
550 555	
ggggtgataa gaggacttct tggggccaga actgtggagg agagcacatt tgattatcat	1798
attgacctgg atttagactc aaagcacatt tgtatttgcc tttttcctta acgtttgaag	1858
tcagtttaaa acttctgaag tgctgtcttt ttacatttta ctctgtccca gtttgaaact	1918
taaaactctt agaattattct cttattattt atatttttat atttcttgaa agatggtaag	1978
tttcttgaag tttttggggc gtttctcttt tactggtgct tagcgcagtg tctcgggcac	2038
tctaaatatt gagtgttatg gaggacacag aggtagcaga atcccagttg aaaatgtttt	2098
gatattttat tgtttggcct attgattcta gacctggcct taagtctgca aaagccatct	2158
ttataaggta ggctgttcca gttaagaagt gggatgatgta gttacaaaga taatatgctc	2218
agtttgacc tttttttcag ttaaagtcta aatatatgaa aattactata cctctaagta	2278
ttttcatgaa attcaccagc agtttgcaag cacagttttg caaggctgca taagaactgg	2338
tgaatggggg aagcattttc attcttctctg ctgaagtaaa gcagaaagta ctgcatagta	2398
tatgagatat agccagctag cttaaagttca gattttgtta ggttcaacc tatgaaaaaa	2458
actattttca taggtcaaaa atggtaaaaa attagcagtt tcataagatt caaccaaata	2518
aatatatata tacacacaca catacatata cacctatata tgttgtgata caaacagttc	2578
gaatgtattt tggtgacagt aataaatcaa tgtgaggatg gatagaattt agtatatgat	2638
agagaaaatg tcataaatgg ataaaaggaa tttacaactt gaggagaaaa cttttacaat	2698
ttcctatggg tgtcagaagt actctcagcg aaaactgatg gctaaaacag tatctactat	2758
tctctgataa cttttttttt gagacagagt ttcattgtca cccaggctgg agtacagtgg	2818
catgatctca gtcactgca aactctgcct cccgaattca agtgattctc ctgcctcagc	2878
ctcctgagta gctgggatta caggcgcccg tcaccacacc caggtaattt ttgtattttt	2938

agtagagacg gagttttgcc atgttggcca agctgatctc aaactcctga cctcaagtga 2998
 tctgcccgcc tcggcctccc aaagtgctga gattacaggc atgacccacc gcgtcaagcc 3058
 tctgacaact attgaatttg taagctgcta tgcaaatggg catttatata aacttgtgat 3118
 gtttcttgtc agaattctga gtactctgtg aagaacagaa atgatcatat tcttatgcat 3178
 ctatctgtat gggctctgaag gtgtatatac aaactgagat gagtccttat gactcttgat 3238
 aagcctgagt ttaacaacaa caaaaatgcc aagttgtcct gagcccttct gcgttggtat 3298
 gccacttccc tactgctcat atgcacgctg gctcccctgg gcacgcaagg atgagtatgg 3358
 gccatggggc cctgtagagc tgcttacctg gtgatgacca tgcaccttac aatttctgaa 3418
 cagttaaccc tatagaagca tgctttatat gagtgccttc tgggaagagg aaccttctta 3478
 atctcttctg tgggattttc aaaatgctaa agactcacac tgcagcaatc atcccagatg 3538
 attaaattca aagaaatagg ttcacaacag gaatatactg aagaactaga gtgtcactgc 3598
 tggatgaactg tggcacggtt gctcaacaca tcacctcgga caaattcagg aagcatttct 3658
 ttagcccaca agtccagacc caggtgctct gtatgtttgt ttttaatat catcatatcc 3718
 aagttcactc tgtcttctg agcagtggaa gatcatattg ctgtaacttc ttttaagtag 3778
 ttgatgtgga aaacatttta aagtgaattt gtcaaaatgc tggttttgtg ttttatccaa 3838
 cttttgtgca tatatataaa gtatgtcatg gcattggttg cttaggagtt cagagttcct 3898
 tcatcatcga aatagtgatt aagtgatccc agaacaagga atactagagt aaaaagcacc 3958
 tctttttcag aaaaaaaaaa aaaaaaaaaa aaaaaa 3993

<210> 6
 <211> 2264
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (222) .. (1790)

<300>
 <308> U78798
 <309> 1996-12-12

<400> 6

ccgcagctgg ggcttggcct gcgggcggcc agcgaagggtg gcgaaggctc cactggatc 60
 cagagtttgc cgtccaagca gcctcgtctc ggcgcgagcgt gtctgtgtcc gtcctctacc 120
 agcgcccttg ctgagcggag tcgtgcgggtt ggtgggggag ccctgccctc ctgggttcggc 180
 ctccccgcgc actagaacga gcaagtgata atcaagttac t atg agt ctg cta aac 236
 Met Ser Leu Leu Asn
 1 5

tgt gaa aac agc tgt gga tcc agc cag tct gaa agt gac tgc tgt gtg 284
 Cys Glu Asn Ser Cys Gly Ser Ser Gln Ser Glu Ser Asp Cys Cys Val

10										15					20					
gcc	atg	gcc	agc	tcc	tgt	agc	gct	gta	aca	aaa	gat	gat	agt	gtg	ggc	332				
Ala	Met	Ala	Ser	Ser	Cys	Ser	Ala	Val	Thr	Lys	Asp	Asp	Ser	Val	Gly					
			25					30					35							
gga	act	gcc	agc	acg	ggg	aac	ctc	tcc	agc	tca	ttt	atg	gag	gag	atc	380				
Gly	Thr	Ala	Ser	Thr	Gly	Asn	Leu	Ser	Ser	Ser	Phe	Met	Glu	Glu	Ile					
		40				45						50								
cag	gga	tat	gat	gta	gag	ttt	gac	cca	ccc	ctg	gaa	agc	aag	tat	gaa	428				
Gln	Gly	Tyr	Asp	Val	Glu	Phe	Asp	Pro	Pro	Leu	Glu	Ser	Lys	Tyr	Glu					
	55					60					65									
tgc	ccc	atc	tgc	ttg	atg	gca	tta	cga	gaa	gca	gtg	caa	acg	cca	tgc	476				
Cys	Pro	Ile	Cys	Leu	Met	Ala	Leu	Arg	Glu	Ala	Val	Gln	Thr	Pro	Cys					
	70				75					80					85					
ggc	cat	agg	ttc	tgc	aaa	gcc	tgc	atc	ata	aaa	tca	ata	agg	gat	gca	524				
Gly	His	Arg	Phe	Cys	Lys	Ala	Cys	Ile	Ile	Lys	Ser	Ile	Arg	Asp	Ala					
				90					95					100						
ggc	cac	aaa	tgt	cca	gtt	gac	aat	gaa	ata	ctg	ctg	gaa	aat	caa	cta	572				
Gly	His	Lys	Cys	Pro	Val	Asp	Asn	Glu	Ile	Leu	Leu	Glu	Asn	Gln	Leu					
			105					110					115							
ttt	cca	gac	aat	ttt	gca	aaa	cgt	gag	att	ctt	tct	ctg	atg	gtg	aaa	620				
Phe	Pro	Asp	Asn	Phe	Ala	Lys	Arg	Glu	Ile	Leu	Ser	Leu	Met	Val	Lys					
		120					125					130								
tgt	cca	aat	gaa	ggc	tgt	ttg	cac	aag	atg	gaa	ctg	aga	cat	ctt	gag	668				
Cys	Pro	Asn	Glu	Gly	Cys	Leu	His	Lys	Met	Glu	Leu	Arg	His	Leu	Glu					
	135					140					145									
gat	cat	caa	gca	cat	tgt	gag	ttt	gct	ctt	atg	gat	tgt	ccc	caa	tgc	716				
Asp	His	Gln	Ala	His	Cys	Glu	Phe	Ala	Leu	Met	Asp	Cys	Pro	Gln	Cys					
	150				155					160					165					
cag	cgt	ccc	ttc	caa	aaa	ttc	cat	att	aat	att	cac	att	ctg	aag	gat	764				
Gln	Arg	Pro	Phe	Gln	Lys	Phe	His	Ile	Asn	Ile	His	Ile	Leu	Lys	Asp					
				170					175					180						
tgt	cca	agg	aga	cag	gtt	tct	tgt	gac	aac	tgt	gct	gca	tca	atg	gca	812				
Cys	Pro	Arg	Arg	Gln	Val	Ser	Cys	Asp	Asn	Cys	Ala	Ala	Ser	Met	Ala					
			185					190					195							
ttt	gaa	gat	aaa	gag	atc	cat	gac	cag	aac	tgt	cct	ttg	gca	aat	gtc	860				
Phe	Glu	Asp	Lys	Glu	Ile	His	Asp	Gln	Asn	Cys	Pro	Leu	Ala	Asn	Val					
		200					205					210								
atc	tgt	gaa	tac	tgc	aat	act	ata	ctc	atc	aga	gaa	cag	atg	cct	aat	908				
Ile	Cys	Glu	Tyr	Cys	Asn	Thr	Ile	Leu	Ile	Arg	Glu	Gln	Met	Pro	Asn					
		215				220					225									
cat	tat	gat	cta	gac	tgc	cct	aca	gcc	cca	att	cca	tgc	aca	ttc	agt	956				
His	Tyr	Asp	Leu	Asp	Cys	Pro	Thr	Ala	Pro	Ile	Pro	Cys	Thr	Phe	Ser					
					235					240					245					
act	ttt	ggc	tgc	cat	gaa	aag	atg	cag	agg	aat	cac	ttg	gca	cgc	cac	1004				
Thr	Phe	Gly	Cys	His	Glu	Lys	Met	Gln	Arg	Asn	His	Leu	Ala	Arg	His					
				250					255					260						
cta	caa	gag	aac	acc	cag	tca	cac	atg	aga	atg	ttg	gcc	cag	gct	gtt	1052				

Leu	Gln	Glu	Asn	Thr	Gln	Ser	His	Met	Arg	Met	Leu	Ala	Gln	Ala	Val		
			265					270					275				
cat	agt	ttg	agc	gtt	ata	ccc	gac	tct	ggg	tat	atc	tca	gag	gtc	cgg	1100	
His	Ser	Leu	Ser	Val	Ile	Pro	Asp	Ser	Gly	Tyr	Ile	Ser	Glu	Val	Arg		
		280					285					290					
aat	ttc	cag	gaa	act	att	cac	cag	tta	gag	ggg	cgc	ctt	gta	aga	caa	1148	
Asn	Phe	Gln	Glu	Thr	Ile	His	Gln	Leu	Glu	Gly	Arg	Leu	Val	Arg	Gln		
	295					300					305						
gac	cat	caa	atc	cgg	gag	ctg	act	gct	aaa	atg	gaa	act	cag	agt	atg	1196	
Asp	His	Gln	Ile	Arg	Glu	Leu	Thr	Ala	Lys	Met	Glu	Thr	Gln	Ser	Met		
310					315					320					325		
tat	gta	agt	gag	ctc	aaa	cga	acc	att	cga	acc	ctt	gag	gac	aaa	gtt	1244	
Tyr	Val	Ser	Glu	Leu	Lys	Arg	Thr	Ile	Arg	Thr	Leu	Glu	Asp	Lys	Val		
				330					335					340			
gct	gaa	atc	gaa	gca	cag	cag	tgc	aat	gga	att	tat	att	tgg	aag	att	1292	
Ala	Glu	Ile	Glu	Ala	Gln	Gln	Cys	Asn	Gly	Ile	Tyr	Ile	Trp	Lys	Ile		
			345					350					355				
ggc	aac	ttt	gga	atg	cat	ttg	aaa	tgt	caa	gaa	gag	gag	aaa	cct	gtt	1340	
Gly	Asn	Phe	Gly	Met	His	Leu	Lys	Cys	Gln	Glu	Glu	Glu	Lys	Pro	Val		
		360					365					370					
gtg	att	cat	agc	cct	gga	ttc	tac	act	ggc	aaa	ccc	ggg	tac	aaa	ctg	1388	
Val	Ile	His	Ser	Pro	Gly	Phe	Tyr	Thr	Gly	Lys	Pro	Gly	Tyr	Lys	Leu		
	375					380					385						
tgc	atg	cgc	ttg	cac	ctt	cag	tta	ccg	act	gct	cag	cgc	tgt	gca	aac	1436	
Cys	Met	Arg	Leu	His	Leu	Gln	Leu	Pro	Thr	Ala	Gln	Arg	Cys	Ala	Asn		
390					395					400					405		
tat	ata	tcc	ctt	ttt	gtc	cac	aca	atg	caa	gga	gaa	tat	gac	agc	cac	1484	
Tyr	Ile	Ser	Leu	Phe	Val	His	Thr	Met	Gln	Gly	Glu	Tyr	Asp	Ser	His		
				410					415					420			
ctc	cct	tgg	ccc	ttc	cag	ggg	aca	ata	cgc	ctt	aca	att	ctt	gat	cag	1532	
Leu	Pro	Trp	Pro	Phe	Gln	Gly	Thr	Ile	Arg	Leu	Thr	Ile	Leu	Asp	Gln		
			425					430					435				
tct	gaa	gca	cct	gta	agg	caa	aac	cac	gaa	gag	ata	atg	gat	gcc	aaa	1580	
Ser	Glu	Ala	Pro	Val	Arg	Gln	Asn	His	Glu	Glu	Ile	Met	Asp	Ala	Lys		
		440					445					450					
cca	gag	ctg	ctt	gct	ttc	cag	cga	ccc	aca	atc	cca	cgg	aac	cca	aaa	1628	
Pro	Glu	Leu	Leu	Ala	Phe	Gln	Arg	Pro	Thr	Ile	Pro	Arg	Asn	Pro	Lys		
		455				460					465						
ggg	ttt	ggc	tat	gta	act	ttt	atg	cat	ctg	gaa	gcc	cta	aga	caa	aga	1676	
Gly	Phe	Gly	Tyr	Val	Thr	Phe	Met	His	Leu	Glu	Ala	Leu	Arg	Gln	Arg		
470					475					480					485		
act	ttc	att	aag	gat	gac	aca	tta	tta	gtg	cgc	tgt	gag	gtc	tcc	acc	1724	
Thr	Phe	Ile	Lys	Asp	Asp	Thr	Leu	Leu	Val	Arg	Cys	Glu	Val	Ser	Thr		
				490					495					500			
cgc	ttt	gac	atg	ggg	agc	ctt	cgg	agg	gag	ggg	ttt	cag	cca	cga	agt	1772	
Arg	Phe	Asp	Met	Gly	Ser	Leu	Arg	Arg	Glu	Gly	Phe	Gln	Pro	Arg	Ser		
			505					510					515				

act gat gca ggg gta tag cttgccctca cttgctcaaa aacaactacc 1820
 Thr Asp Ala Gly Val
 520

tggagaaaac agtgcctttc cttgccctgt tctcaataac atgcaaaca acaagccacg 1880
 ggaaatatgt aatatctact agtgagtgtt gttagagagg tcacttacta tttcttcctg 1940
 ttacaaatga tctgaggcag ttttttcctg ggaatccaca cgttccatgc tttttcagaa 2000
 atgttaggcc tgaagtgcct gtggcatgtt gcagcagcta ttttgccagt tagtatacct 2060
 ctttgttgta ctttcttggg cttttgctct ggtgtatattt attgtcagaa agtccagact 2120
 caagagtact aaacttttaa taataatgga ttttccttaa aacttcagtc tttttgtagt 2180
 attatatgta atatattaaa agtgaaaatc actaccgcct tgaaaaaaaa aaaaaaaaaa 2240
 ctcgaggggg gcccgtaccc aatg 2264

<210> 7
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 7
 tttaagttgc tccagggc 18

<210> 8
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 8
 gccgggcgag gactgctg 18

<210> 9
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 9
 gcagacggtg ggagggca 18

<210> 10
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 10
 ctgggctcct ttgggtcc 18

<210> 11
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 11
 cacagcagag agccctgg 18

<210> 12
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 12
 attcctcggg ttctcaga 18

<210> 13
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 13
 ccattcctcg ggttctca 18

<210> 14
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 14
 cctcgccatt cctcgggt 18

<210> 15
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 15
 gatcctcgcc attcctcg 18

<210> 16
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 16
 agacggcttc ctgggctt 18

 <210> 17
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 17
 ttgaaggagc agccgaca 18

 <210> 18
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 18
 ggccttccac tgtttcat 18

 <210> 19
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 19
 ccacttccac ggctgcct 18

 <210> 20
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 20
 cgcctggtga cattggtg 18

 <210> 21
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 21
 cgcatacatc tcccctct 18

 <210> 22
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>		
<223>	antisense sequence	
<400>	22	
aggcgtcaat	ggcgtgct	18
<210>	23	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	23	
ggaaggcgtc	aatggcgt	18
<210>	24	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	24	
ggaagaagag	tgggcatc	18
<210>	25	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	25	
cgtaggcgtg	cttggtg	18
<210>	26	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	26	
gccccgccca	ccctaagt	18
<210>	27	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	27	
ggagccccgc	ccacccta	18
<210>	28	
<211>	18	

<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	28	
ctcaggagcc	ccgcccac	18
<210>	29	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	29	
aagggcaggg	catcacag	18
<210>	30	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	30	
tttgtgccct	gaggtctt	18
<210>	31	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	31	
cacccatctt	tgtgccct	18
<210>	32	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	32	
ggcctcccag	tgtcgcat	18
<210>	33	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	33	
cccggtcctg	tttctgac	18

<210> 34
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 34
 gcaccccatc ccttcac 18

<210> 35
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 35
 tggagccgctc tgggtttg 18

<210> 36
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 36
 gtcttcaaatt ccaacccc 18

<210> 37
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 37
 ttctgggctg gaaggaaa 18

<210> 38
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 38
 actttctggg ctggaagg 18

<210> 39
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400>	39	
agagactttc	tgggctgg	18
<210>	40	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	40	
tttccagaac	ccctgtag	18
<210>	41	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	41	
atgtttccag	aaccctg	18
<210>	42	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	42	
gggctgggtg	tgctcctg	18
<210>	43	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	43	
tttatgcccc	tcttcttc	18
<210>	44	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	44	
ggaaagttta	tgcccctc	18
<210>	45	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	

<220>			
<223>		antisense sequence	
<400>	45		
tacgggattc	tggaagc		18
<210>	46		
<211>	18		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>		antisense sequence	
<400>	46		
aggtgttacg	ggattctg		18
<210>	47		
<211>	20		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>		antisense sequence	
<400>	47		
gtcgcagcgc	gccggaattc		20
<210>	48		
<211>	20		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>		antisense sequence	
<400>	48		
ccaacggtcg	cagcgcgccg		20
<210>	49		
<211>	20		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>		antisense sequence	
<400>	49		
cagccatgag	agctgtgacc		20
<210>	50		
<211>	20		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>		antisense sequence	
<400>	50		
acgctagctg	cagccatgag		20
<210>	51		
<211>	20		

<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	51	
gccacactgc	gcctggaagg	20
<210>	52	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	52	
ccggcaggct	ctccacctcc	20
<210>	53	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	53	
gcagcggcct	tcgtggcagc	20
<210>	54	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	54	
cctcgtggtg	cgcttcacg	20
<210>	55	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	55	
ctcgacactt	gccacaagtc	20
<210>	56	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	56	
cactgcacct	cgtgctcctg	20

<210> 57
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 57
 cctctgcagg agctctgacc 20

<210> 58
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 58
 cagccggtgc tgccggctgc 20

<210> 59
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 59
 ccggtgccgt cgccgttcag 20

<210> 60
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 60
 acgtcgggcc tgaaggcgtc 20

<210> 61
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 61
 ctgtcaggtc cacaatggcc 20

<210> 62
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400>	62	
gccggctgtg	cctggctgcc	20
<210>	63	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	63	
cttggctgca	ggccgacacc	20
<210>	64	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	64	
cggccaatgc	caccacagcc	20
<210>	65	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	65	
actgtgctcc	tgctacatgg	20
<210>	66	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	66	
gctctggcca	gcaggaggcc	20
<210>	67	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	67	
ccacagccag	cctggccaag	20
<210>	68	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		

<223>	antisense sequence	
<400>	68	
ctctgtcttc	gtgagctgga	20
<210>	69	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	control sequence	
<400>	69	
cctcgtgctg	cggcttcacg	20
<210>	70	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	control sequence	
<400>	70	
cctggtgctc	cggcttcacg	20
<210>	71	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	71	
agagccgacg	accgccgc	18
<210>	72	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	72	
ggaagagccg	acgaccgc	18
<210>	73	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	73	
cgcgccagga	gagtccat	18
<210>	74	
<211>	18	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	74	
	ttagcggcgg gttagtct	18
<210>	75	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	75	
	agctttagcg gcgggtta	18
<210>	76	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	76	
	ctcggctctgc ttcgggct	18
<210>	77	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	77	
	tgccacact cggctctgc	18
<210>	78	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	78	
	cggtgccac actcggtc	18
<210>	79	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	79	
	gaagcggtagc ccacactc	18

<210>	80	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	80	
ttacacgcct	tctccacg	18
<210>	81	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	81	
gtatttacac	gccttctc	18
<210>	82	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	82	
ccggtattta	cacgcctt	18
<210>	83	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	83	
gagggcagga	caccacca	18
<210>	84	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	84	
tgtgaggga	ggacacca	18
<210>	85	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	

<400>	85	
cacttgtgag	ggcaggac	18
<210>	86	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	86	
gctggtttgt	cccctgaa	18
<210>	87	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	87	
atctgctggt	ttgtcccc	18
<210>	88	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	88	
cgcggttctg	gagggact	18
<210>	89	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	89	
ccccgcactc	ttgtccac	18
<210>	90	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	90	
ttgccccgca	ctcttgtc	18
<210>	91	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	antisense sequence	
<400>	91	
ccacttgccc	cgcactct	18
<210>	92	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	92	
gagccacttg	ccccgcac	18
<210>	93	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	93	
ttccgagcca	cttgcccc	18
<210>	94	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	94	
tccgccgctt	gtagtcgc	18
<210>	95	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	95	
tgcttccgcc	gcttgtag	18
<210>	96	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	96	
tcctgcttcc	gccgcttg	18
<210>	97	
<211>	18	
<212>	DNA	

<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	97	
gtccccgttc	aggtagac	18
<210>	98	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	98	
tcccgtcccc	gttcaggt	18
<210>	99	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	99	
ccatcccgtc	cccgttca	18
<210>	100	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	100	
tccccatccc	gtccccgt	18
<210>	101	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	101	
cccttcccca	tcccgctc	18
<210>	102	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	102	
tgcgtcccct	tccccatc	18

<210> 103
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 103
 aagtgcgtcc ccttcccc 18

<210> 104
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 104
 cgacaagtgc gtcccctt 18

<210> 105
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 105
 aaggaagcag ggcattcat 18

<210> 106
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 106
 ctctccagtg ggcttctt 18

<210> 107
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 107
 tcatctctcc agtgggct 18

<210> 108
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400>	108	
gctaaatcca cctcccca		18
<210>	109	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	109	
tctgccgctt cctccgtc		18
<210>	110	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	110	
ccgccttctg ccgcttcc		18
<210>	111	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	111	
gcatggcggg cgagcggc		18
<210>	112	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	112	
ccgtcgcttg ggcttctc		18
<210>	113	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	113	
gggcacttga agactcct		18
<210>	114	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	antisense sequence	
<400>	114	
ctcagggcac	ttgaagac	18
<210>	115	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	115	
tggtcctcag	ggcacttg	18
<210>	116	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	116	
aagctggtcc	tcagggca	18
<210>	117	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	117	
gcggcagccc	tcctcact	18
<210>	118	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	118	
ctccagcggc	agccctcc	18
<210>	119	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	119	
tagggcaggg	aatgacat	18
<210>	120	
<211>	18	

<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	120	
cgattagggc	agggaatg	18
<210>	121	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	121	
gggcagcgat	tagggcag	18
<210>	122	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	122	
gcctccccac	tgaagtca	18
<210>	123	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	123	
atgcgggcac	cacactta	18
<210>	124	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	124	
gggcaggcaa	caggcagc	18
<210>	125	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	125	
ccacagtgcc	cacaccac	18

<210> 126
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 126
 cgagccacag tgcccaca 18

<210> 127
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 127
 tcctcccag ccacagtg 18

<210> 128
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 128
 caggtcctcc cgagccac 18

<210> 129
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 129
 ggcagagcac cagggcgg 18

<210> 130
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400> 130
 ctttgaatgg gcagagca 18

<210> 131
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> antisense sequence

<400>	131	
ggagtctttg	aatgggca	18
<210>	132	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	132	
atgccgtgcc	attgccag	18
<210>	133	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	133	
ctcaccaggg	cacacatc	18
<210>	134	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	134	
cagctcctgc	cgttgccg	18
<210>	135	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	135	
atgagcacgc	catcactg	18
<210>	136	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	136	
tgtagccgcc	gtccatag	18
<210>	137	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	antisense sequence	
<400>	137	
gcctcctgta gccgccgt		18
<210>	138	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	138	
tagaaggctg ggctgaag		18
<210>	139	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	139	
gtgtgtagaa ggctgggc		18
<210>	140	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	140	
gtgtgccctc accactgc		18
<210>	141	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	141	
gacacggcgg gcaaagg		18
<210>	142	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	142	
gaaggtgaca cggcgggc		18
<210>	143	
<211>	18	

<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	143	
gcccagggtc	gctctgat	18
<210>	144	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	144	
cttcagttt	gggtcggg	18
<210>	145	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	145	
gataaccaa	gcccagag	18
<210>	146	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	146	
catcgtcctt	tcccctcg	18
<210>	147	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	147	
ggccagggct	gaagcacc	18
<210>	148	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	148	
ttgtttccag	cccttcac	18

<210>	149	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	149	
catgtctgcc	ctacccaa	18
<210>	150	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	150	
gctcccctgc	tgtgccct	18
<210>	151	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	151	
tgaataagcc	attgtggg	18
<210>	152	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	152	
ctttatgctc	ttctgaat	18
<210>	153	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	153	
ggatgaaacc	acagggca	18
<210>	154	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	

<400> 154
 tcaaagtcca aggaaatg 18

 <210> 155
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 155
 tgaagcacccg agtggcag 18

 <210> 156
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 156
 gggcagattg gcactgtg 18

 <210> 157
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 157
 ctcctgagat ttgatgac 18

 <210> 158
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 158
 ctttccgtag gactggct 18

 <210> 159
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 159
 gattctgtag attgatga 18

 <210> 160
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>		
<223>	antisense sequence	
<400>	160	
	ttcatctacc tcagtttt	18
<210>	161	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	161	
	tccggttacag cacagcca	18
<210>	162	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	162	
	gcatgtgctc ccgtaagg	18
<210>	163	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	163	
	cttttcaagt ttctttat	18
<210>	164	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	164	
	cttccatcaa aggtctca	18
<210>	165	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	165	
	tctaaaacgg ctaatctt	18
<210>	166	
<211>	18	

<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	166	
	tcatcttgta atctgtca	18
<210>	167	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	167	
	ggactggctg aagatgga	18
<210>	168	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	168	
	ccctccctga cccatccc	18
<210>	169	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	169	
	gaatgagcca caaagcgg	18
<210>	170	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	170	
	caagaacaga gtgtcatc	18
<210>	171	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	171	
	gtctaaatcc aggtcaat	18

<210>	172	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	172	
aaacttacca	tctttcaa	18
<210>	173	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	173	
ctctgtgtcc	tccataac	18
<210>	174	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	174	
cttaactgga	acagccta	18
<210>	175	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	175	
gcaggaagaa	tgaaaatg	18
<210>	176	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	176	
tatttggttg	aatcttat	18
<210>	177	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	

<400>	177	
aaattctatc	catcctca	18
<210>	178	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	178	
aaattgtaaa	ggttttct	18
<210>	179	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	179	
acaatgaaac	tctgtctc	18
<210>	180	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	180	
gcaaaaactcc	gtctctac	18
<210>	181	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	181	
caatagttgt	cagaggct	18
<210>	182	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	182	
aaggactcat	ctcagttt	18
<210>	183	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	

<220>			
<223>	antisense sequence		
<400>	183		
taacaacgca	gaagggct		18
<210>	184		
<211>	18		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>	antisense sequence		
<400>	184		
agtagggaag	tggcataa		18
<210>	185		
<211>	18		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>	antisense sequence		
<400>	185		
catcaccagg	taagcagc		18
<210>	186		
<211>	18		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>	antisense sequence		
<400>	186		
tcctgttg	aacctatt		18
<210>	187		
<211>	18		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>	antisense sequence		
<400>	187		
ggacttg	gctaaaga		18
<210>	188		
<211>	18		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>	antisense sequence		
<400>	188		
gctcaggaag	acagagt		18
<210>	189		
<211>	18		

<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	189	
tgaactccta	agcaaacc	18
<210>	190	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	190	
gatgatgaag	gaactctg	18
<210>	191	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	191	
aggccaagcc	ccagctgcgg	20
<210>	192	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	192	
cgccaccttc	gctggccgcc	20
<210>	193	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	193	
gagacgaggc	tgcttggacg	20
<210>	194	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	194	
ggacacagac	actgcgcgcc	20

<210>	195	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	195	
ccaaggcgct	ggtagaggac	20
<210>	196	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	196	
ttgctcgttc	tagtgcgcg	20
<210>	197	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	197	
catagtaact	tgattatcac	20
<210>	198	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	198	
agcagactca	tagtaacttg	20
<210>	199	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	199	
acagtttagc	agactcatag	20
<210>	200	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	

<400> 200
 acagcgctac aggagctggc 20

 <210> 201
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 201
 attgatttta tgatgcaggc 20

 <210> 202
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 202
 gtgacctgca tcccttattg 20

 <210> 203
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 203
 gtctcagttc catcttgtgc 20

 <210> 204
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 204
 agagcaaact cacaatgtgc 20

 <210> 205
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> antisense sequence

 <400> 205
 ttttggaagg gacgctggca 20

 <210> 206
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>		
<223>	antisense sequence	
<400>	206	
aaatgccatt	gatgcagcac	20
<210>	207	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	207	
attcacagat	gacatttgcc	20
<210>	208	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	208	
cgtgccaagt	gattcctctg	20
<210>	209	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	209	
ggtgttctct	tgtagggtggc	20
<210>	210	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	210	
ggccaacatt	ctcatgtgtg	20
<210>	211	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	211	
cgctcaaact	atgaacagcc	20
<210>	212	
<211>	20	

<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	212	
aggcgaccct	ctaactggtg	20
<210>	213	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	213	
ccattttagc	agtcagctcc	20
<210>	214	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	214	
cgaatgggttc	gtttgagctc	20
<210>	215	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	215	
ccattgcact	gctgtgcttc	20
<210>	216	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	216	
gcagtcggta	actgaagggtg	20
<210>	217	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	217	
gccttacagg	tgcttcagac	20

<210>	218	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	218	
agcaagcagc	tctggtttgg	20
<210>	219	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	219	
ggctacccat	gtcaaagcgg	20
<210>	220	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	220	
ttgtttttga	gcaagtgagg	20
<210>	221	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	221	
ggcactgttt	tctccaggta	20
<210>	222	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	222	
acatatttcc	cgtggcttgt	20
<210>	223	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	

<400>	223	
ggaacgtgtg gattcccagg		20
<210>	224	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	224	
tgctgcaaca tgccacaggc		20
<210>	225	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	antisense sequence	
<400>	225	
atacaccaga gcaaaagccc		20
<210>	226	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	control sequence	
<400>	226	
aaaagactga acttttaagg		20
<210>	227	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	control sequence	
<400>	227	
acttaattac catgactagt		20
<210>	228	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	control sequence	
<400>	228	
ccacgaggag caccatcaag		20